Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

REMARKS

Claims 1 to 33 were pending in the application at the time
of the office action. Claims 1 to 33 also remain rejected as
anticipated.

Claims 1 to 33 stand rejected under 35 U.S.C. §102(e) as
being anticipated by U.S. Patent No. 6,721,727, hereinafter
referred to as Chau.

Applicants respectfully continue to traverse the
anticipation rejection of Claim 1. Prior to considering the
rejection, Applicants first note that to make a prima facie
anticipation rejection, the MPEP directs:

> TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY
> ELEMENT OF THE CLAIM
>
> "A claim is anticipated only if each and every
> element as set forth in the claim is found, either
> expressly or inherently described, in a single prior art
> reference.". . . . < "The identical invention must be
> shown in as complete detail as is contained in the ...
> claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226,
> 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements
> must be arranged as required by the claim, but this is not
> an *ipsissimis verbis* test, i.e., identity of terminology
> is not required.

MPEP § 2131, 8th Ed., Rev. 5, p. 2100-67 (August 2006). It is
noted that this directive stated the claim element **"must be"**
shown in as complete detail and arranged as required by the
claim. Thus, Chau must show the invention to the same level of
detail as recited in Claim 1.

The MPEP puts forth specific criteria that are to be
followed in interpreting a claim. These criteria will be
quoted and applied to Claim 1. A comparison of the correct
interpretation of Claim 1, as required by the MPEP, with Chau
will demonstrate that the anticipation rejection of Claim 1 is
not well founded.

Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

The MPEP requires:

*>USPTO< personnel must first determine the scope of a
claim by thoroughly analyzing the language of the claim
<u>before</u> determining if the claim complies with each
<u>statutory</u> requirement for patentability (Emphasis in
original.)

MPEP § 2106 C., 8th Ed., Rev. 5, p 2100-6 (August 2006).

The MPEP further requires:

**>USPTO< personnel are to correlate each claim limitation
to all portions of the disclosure that describe the claim
limitation. This is to be done in all cases**>, regardless
of whether< the claimed invention is defined using means
or step plus function language. The correlation step will
ensure that *>USPTO< personnel correctly interpret each
claim limitation.

The subject matter of a properly construed claim is
defined by the terms that limit its scope. It is this
subject matter that must be examined. (Emphasis added.)

MPEP § 2106 C., 8th Ed., Rev. 5, p 2100-7, (August 2006).

While the Examiner is permitted to interpret the claim
language broadly in construing the claim, the MPEP puts
specific limitations on such an interpretation. For example,

**CLAIMS MUST BE GIVEN THEIR BROADEST REASONABLE
INTERPRETATION**

During patent examination, the pending claims must be
"given their broadest reasonable interpretation consistent
with the specification."

MPEP § 2111 8th Ed. Rev. 5, p 2100-37 (August 2006).

The broadest reasonable interpretation of the claims
must also be consistent with the interpretation that those
skilled in the art would reach.

MPEP § 2111 8th Ed. Rev. 5, p 2100-38 (August 2006).

This means that the words of the claim must be given their
plain meaning unless **>the plain meaning is inconsistent
with< the specification. *In re Zletz*, 893 F.2d 319, 321,
13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (discussed below);

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Page 3 of 14

Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE
Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371,
1372, 69 USPQ2d 1857 (Fed. Cir. 2004) (Ordinary, simple
English words whose meaning is clear and unquestionable,
absent any indication that their use in a particular
context changes their meaning, are construed to mean exactly
what they say.

MPEP § 2111.01, I., 8th Ed. Rev. 5, p 2100-38 (August 2005).

Claim 1 first recites " a markup document containing a
plurality of elements and a plurality of attributes." Thus, a
single markup document with more than one element and more than
one attribute is recited. Since each recitation in Claim 1
refers back to these elements and attributes, the method is
directed at processing the markup document.
Claim 1 further recites:

storing an element record for every element of said
plurality of elements in an element table of said
relational database so that said relational database
includes a plurality of element records, wherein each
element record includes a unique element ID, and an
element data set

Claim 1 explicitly defines an element table. Further,
Claim 1 recited what is stored in the element table, for
example, "an element record for every element of said plurality
of elements." Therefore, the element table includes a
plurality of elements records because there is an element
record for every element based on the plain meaning of the
claim language and consequently "said relational database
includes a plurality of element records."
Also, as taught by Chau, elements are a subset of an XML
document and so an interpretation of "element" must be
consistent with the usage in Chau and consistent with the
requirement of Claim 1 that the elements are contained in a
markup document, because to use a different definition is
consistent with neither the level of skill in the art as

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Page 4 of 14

Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

established by Chau nor the plain meaning of the claim language.

Also, Claim 1 recites that each element record includes an identifier and not just any identifier, but rather a specific identifier, an "element identifier". Claim 1 further recites that the element identifier is unique. An element identifier is unique only if it is the only one. Therefore, the plain meaning of Claim 1 is that each element record includes a different element identifier, because otherwise the element identifier is not unique. The fact that each element identifier is unique means that the element identifier can be used to identify the element data set in that element record.

Claim 1 also recited:

> wherein said element table and said attribute table include content of said markup document and further wherein a new markup document having a same content as said markup document can be constructed by retrieving said element data set in each of said plurality of element records stored in said element table of said relational database

Thus, the element table is further defined as including "content of said markup document" and "a new markup document having a same content as said markup document can be constructed" by using the element data sets stored in the element table. Again, a single markup document is recited and not multiple markup documents that were used in the rejection.

The rejection does not cite any teaching of such a table or records in Chau and instead stated:

> Chau teaches the claimed step of "storing an element record for every element of said plurality of elements in an element table of said relational database, wherein each element record includes a unique element ID, and an element data set" as XML enables storing entire XML documents into a database.

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Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

Note that the quoted language is not from Chau, but rather from Applicants' Claim 1. The rejection continues:

> The root_id in the application table is unique element ID and the user creates root_id as a primary key of the application table. When there is no primary key in the table, then XML system create a primary key as DXXROOT_ID and all side tables will have this key (Fig. 3, col. 6, lines 38-40; col. 18, line 67 to col. 19, line 1 and col. 17, lines 55-61).
>
> . . . . .
>
> . . . . whereas Application table 300 corresponds to element table . . .

Each of the citations in Chau is considered and then Chau is considered in further detail. Fig. 3 of Chau shows "an application or main table and its four side tables." Chau, Col. 3, lines 33 and 34. The application table in Fig. 3 fails to show any element records in the same detail as recited in Claim 1. The root_id is not described as being associated with an element and in fact it is described as a primary key for the application table in the rejection rather than being associated with a specific element record as recited in Claim 1.

Col. 6, lines 38 to 40 of Chau taught:

> With native XML formatted documents, XML enables storing entire XML documents into a database and searching on known elements or attributes

This general statement teaches nothing concerning how the documents are stored and so is not sufficient under the directions of the MPEP to anticipate the sections of Claim 1 just quoted.

Chau, Col. 18, line 67 to Col. 19, line 1 taught:

> FIG. 3 illustrates an application or main table and its four side tables. The Application table 300 has a root_id in common with each side table 302, 304, 306, and

Page 6 of 14

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Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

308. The side tables 302, 304, 306, and 308 correspond to the side tables defined in the DAD above.

while Chau, Col. 17, lines 55 to 61 taught:

A user can decide whether <u>the primary key of the application table is to be the "root id"</u>. If the primary key does not exist in the application table, or for some reason a user doesn't want to use the primary key, then XML System will alter application table to add a column

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308. The side tables 302, 304, 306, and 308 correspond to the side tables defined in the DAD above.

while Chau, Col. 17, lines 55 to 61 taught:

> A user can decide whether <u>the primary key of the application table is to be the "root id"</u>. If the primary key does not exist in the application table, or for some reason a user doesn't want to use the primary key, then XML System will alter application table to add a column DXXROOT_ID for storing a unique identifier created at insertion time (i.e., when data is inserted into the application or main table). (Emphasis Added)

None of these references teach exactly the structure of Claim 1 as quoted above. Further, the only basis of the interpretation, as shown in the rejection, is Applicants' claim language. Chau teaches that the application table is fundamentally different from the element table of Claim 1.

First, Chau unambiguously explains that the application table is not an element table as recited in Claim 1.

> One embodiment of the invention provides an XML System which <u>solves the problem of fast searching and indexing of XML element/attribute values of XML documents when they are stored inside a database as column data.</u> (Emphasis added.)

Chau, Col. 16, lines 26 to 30

Thus, Chau expressly stated that XML documents are stored as column data and teaches nothing concerning element records of an element table as recited in Claim 1. According to Chau, the entire content of an XML document is stored in a column. There is no ambiguity as to this fact, because Chau stated

> . . . an XML column is used to store entire XML documents . .

Chau, Col. 7, line 66.

Page 7 of 14

Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE
The XML System provides several user defined types
(UDTs) for XML columns. These data types are used to
identify the storage types of XML documents in the
application table.

Chau, Col. 8, lines 14 to 17.

Finally,

D.3 XML Column/User Defined Types

An <u>XML column is designed to store XML documents in
their native format in the database as column data</u>. . . .
. An XML column is created when a user creates or alters
an application table. (Emphasis Added)

Chau, Col. 19, lines 4 to 21.

D.8 Inserting XML Documents
<u>For XML columns, an entire XML document is always
stored as the column data.</u> (Emphasis Added)

Chau, Col. 22, lines 13 to 15.

Thus, Chau expressly taught that an XML document is stored
in its native format, and that XML columns are used in the
application table cited in the rejection of Claim 1. Storing
an XML document its native format in a column teaches away from
the element table and the specific structure of that table as
recited in Claim 1. Further, the root id of Chau fails to
teach anything concerning a unique element ID for an element
data set. At best it is understood, the rejection relies upon
multiple XML documents that each have a different root_id so
that the application table looks like:

root_id1	Entire XML document 1
root_id2	Entire XML document 2

Page 8 of 14

Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

| root_id3 | Entire XML document 3 |

The rejection apparently reads an element record on the unique root_id for the entire XML document and the element data set is assumed to be the entire XML document.

This is error for multiple reasons. First, it requires multiple XML documents and the element data sets are not for a single XML document, but rather for three different XML documents in the above example. The element data sets of Claim 1 are associated with the "markup document containing a plurality of elements."

A single unique ID for the entire XML document and storing the complete XML document fails to teach an element record for each of a plurality of elements in a "markup document containing a plurality of elements." A single record with a unique root_id and the entire XML document fails to teach "an element record for every element of said plurality of elements" in a "markup document containing a plurality of elements" "so that said relational database includes a plurality of element records."

The root_id of Chau is not described as being unique for each element in the XML document but rather unique with respect to the entire XML document. There has been no showing that the root_ID can be used to distinguish between different element data sets within a single XML document of Chau. Conversely, since each element ID of Claim 1 is unique, the element ID identifies a specific element data set in the element table. According to Chau, the entire content ofan XML document is stored in a column and not an element data set of the document as recited in Claim 1.

As noted above, Claim 1 recites a single markup document and not multiple documents as stated at page 20, the first full paragraph of final office action dated July 20, 2006. Therefore, the Office has on the record admitted the Office's

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Page 9 of 14

AFTER FINAL EXPEDITED PROCEDURE

interpretation of Chau fails to teach exactly the element table with the characteristics recited in Claim 1.

Nevertheless, the rejection continues:

Further, Chau teaches the claimed step of "storing an attribute record for every attribute of said plurality of attributes in an attribute table of said relational database so that said relational database includes a plurality of attribute records, wherein said attribute record comprises an attribute data set for one attribute and an element ID of an element to which the one attribute is assigned wherein said element table and said attribute table include content of said markup document and further wherein a new markup document having a same content as said markup document can be constructed by retrieving said element data set in each of said plurality of element records stored in said element table of said relational database and by retrieving said attribute data set in each of said plurality of attribute records stored in said attribute table of said relational database" as the side tables 302, 304, 306 and 308 correspond to the attribute tables . . . . Side tables are dependent on the Application table and side tables also use the same root_id or the XML system created primary key DXXROOT_ID((Fig. 3, col. 18, line 67 to col. 19, line 1 and col. 17, lines 61-63; col. 7, lines 38-39; col. 8, lines 22-24 and col. 24, lines 50-67).

Again, the interpretation relies upon Applicants' claim language and not any teaching in Chau. Chau explicitly taught that side tables 306 and 308 did not include attributes (See Chau, Col. 18, lines 59 to 62). Further, the interpretation ignores the explicit teaching in Chau on how to compose XML documents--"FIG. 10 is a flow diagram illustrating the process performed by the XML system using RDB_node mapping to compose XML documents."-- and how to decompose XML document--"FIG. 11 is a flow diagram illustrating the steps performed by the XML System to decompose XML documents with application specific mappings." The processes disclosed in this diagrams are fundamentally different from that recited in Claim 1, but yet the rejection argues that one of skill in the art would ignore these teachings and would read Chau to teach exactly the method

Page 10 of 14

BEST AVAILABLE COPY

Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

of Claim 1 despite the fact, as pointed out below, that Chau
teaches the information relied upon in the rejection is an
indexing system used for searching and not the method of
Claim 1.

Chau does not teach that the elements in the side tables
are created to include element data sets for content of an XML
document and to retrieve those element data sets for content in
another XML document. First, Chau requires a programmer to
specify what is included in the side tables, i.e.,

> The embodiment of the invention permits <u>application
> programmers to define a Data Access Definition (DAD) which
> identifies the XML elements or attributes that need to be
> indexed and defines the mapping between XML elements or
> attributes to columns in one or more side tables.</u> The DAD
> is an XML formatted document that is used to specify
> within an XML document which elements or attributes are to
> be searched. (Emphasis Added)

Chau, Col. 16, lines 45 to 52.

Thus, the side table content is specified by the
application programmer to identify attributes that need to
indexed. This teaches away from selecting element data sets so
that the content of a markup document can be included in a new
markup document. Chau repeats that the side tables are for a
limited specific purpose, searching, and not for reconstructing
content as recited in Claim 1.

> Additionally, the embodiment of the invention stores
> XML document data in an application table, <u>while storing
> particular elements or attributes in side tables. The data
> stored in the side tables is referred to as "metadata" and
> is used to search for elements or attributes in the XML
> documents stored as column data in the application table.</u>
> During the enabling of a column which contains XML
> documents, side tables are created (based on the DAD) to
> store duplicate data of these elements or attributes.
> (Emphasis Added)

Chau, Col. 16, lines 59 to 67.

Page 11 of 14

Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

Thus, Chau unambiguously taught, as previously pointed out, that the XML documents are stored in a column of the main table, while side tables are created based on a DAD that an application programmer specifies and are used in searching of the XML documents stored in the column. The rejection still has not cited any teaching that data is retrieved from the side table to reconstruct the content of the document and in fact, Fig. 10 of Chau contradicts the conclusory rejection. Accordingly, Chau fails to teach the method of Claim 1 in the same level of detail as recited in Claim 1. Applicants respectfully request reconsideration and withdrawal of the anticipation rejection of Claim 1.

Claims 2, 5 and 8 to 11 depend from Claim 1 and so distinguish over the prior art for at least the same reasons as Claim 1 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 2, 5 and 8 to 11.

Claims 3 and 4 recite "said element data set contains a parent element ID." The rejection previously cited the root id of Chau as teaching exactly the unique element identifier in the element record. The rejection of these claims again cites the root id of Chau. The root id of Chau cannot teach exactly both the unique element identifier and a parent element ID in the element data set. This is but further evidence the explicit claim limitations have been ignored. One of the rejections must be wrong. Also, Claims 3 and 4 depend from Claim 1 and so distinguish over the prior art for at least the same reasons as Claim 1 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 3 and 4.

With respect to the anticipation rejection of Claims 6 and 7, the rejection cited to a portion of a description of how to write a DAD by an application programmer. This description fails to mention storing only for "every unique element name of the plurality of elements." It also does not teach the element

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Page 12 of 14

Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

name record or a unique element name ID is defined only for such elements. The cited description fails to mention storing only for "every unique attribute name of the plurality of attributes." It also does not teach the attribute name record or a unique attribute name ID. Also, Claims 6 and 7 depend from Claim 1 and so distinguish over the prior art for at least the same reasons as Claim 1 that were discussed above. Applicants request reconsideration and withdrawal of the · anticipation rejection of each of Claims 6 and 7.

Claim 12 recites storing particular information in a particular way in four different tables. Further, Claim 12 includes language similar to that discussed above with respect to Claim 1 and so the remarks with respect to Claim 1 are applicable to Claim 12, and are incorporated herein by reference. Also, the comments with respect to Claims 6 and 7 are incorporated herein by reference. Applicants request reconsideration and withdrawal of the anticipation rejection of Claim 12.

Claims 13 to 15 depend from Claim 12 and so distinguish over the prior art for at least the same reasons as Claim 12 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 13 to 15.

Each of independent Claims 16, 26, and 30 stand rejected based upon substantially the same rationale as Claim 1. Each of these claims includes language similar to that discussed above with respect to Claim 1 and so the remarks with respect to Claim 1 are applicable for each of these claims and are incorporated herein by reference with respect to each. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 12, 16, 26, and 30.

Claims 17 to 25 depend from Claim 16 and so distinguish over the prior art for at least the same reasons as Claim 16 that were discussed above. Applicants request reconsideration

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Page 13 of 14

Appl. No. 10/054,544
Amdt. dated September 20, 2006
Reply to Office Action of July 20, 2006

AFTER FINAL EXPEDITED PROCEDURE

and withdrawal of the anticipation rejection of each of Claims 17 to 25.

Claims 27 to 29 depend from Claim 26 and so distinguish over the prior art for at least the same reasons as Claim 26 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 27 to 29.

Claims 31 to 33 depend from Claim 30 and so distinguish over the prior art for at least the same reasons as Claim 30 that were discussed above. Applicants request reconsideration and withdrawal of the anticipation rejection of each of Claims 31 to 33.

Claims 1 to 33 remain in the application. For the foregoing reasons, Applicant(s) respectfully request allowance of all pending claims. If the Examiner has any questions relating to the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicant(s).

CERTIFICATE OF TRANSMISSION
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September 20, 2006
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Respectfully submitted,

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Page 14 of 14